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EXAMINER	
HINDENLANG, ALISON L	
ART UNIT	PAPER NUMBER
1744	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,235	SIMMELINK ET AL.	
	Examiner	Art Unit	
	ALISON HINDENLANG	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-8 and 10-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/23/2010 and 10/22/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Examiner wishes to point out that claims 14 and 15 are process claims. It is well settled that the intended use of a claimed apparatus is not germane to the issue of the patentability of the claimed structure. (*In re Casey*, 152 USPQ 235; *Ex parte Masham*, 2 USPQ2d 1647; *In re Otto*, 136 USPQ 459) In this case, "for spinning ultra-high molar mass polyethylene (UHPE) having an intrinsic viscosity of between 5 and 40 dl/g" (claim 14, lines 1-2) is considered to be a recitation of intended use and is given no patentable weight.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chau (US 5296185) and optionally further in view of Honnaker (US 4054468) (both of record).

4. With respect to claims 14 and 15, Chau teaches:

Spinplate… comprising

at least 10 spinholes ("the spinneret may contain as many as 100 or 1000 or more" spinholes, column 5, lines 25-26),

wherein each spinhole has a geometry comprising

an inflow zone of constant diameter of at least Do and a length of Lo ("each hole contains: (a) an inlet (10", column 5, lines 31-32, figure 1)…,

a downstream zone of constant diameter of at least Dn wherein Dn is from 0.3 to 5 mm (in a low draw-small hole process, the capillary section and the ext preferably have an average diameter of no more than about 0.5mm...at least 0.5 mm in diameter...in a high-draw-large hole process... at least about 0.5 mm in diameter...preferably no more than about 5 mm in diameter...", column 6, lines 14-24) and a length Ln ("a capillary section (9)", column 5, line 36) and a length/diameter ratio Ln/Dn of from 0 to 25 ("the length of the capillary section…is preferably at least about 0.1 times the diameter….is preferably no more than about 10 times the diameter of the capillary", column 5, lines 45-52), and

a contraction zone between the inflow and downstream zones having a gradual decrease in diameter from the diameter Do of the inflow zone to the diameter Dn of the downstream zone ("a transition cone (2) where the hole narrows by and angle (theta) before entry into a capillary", column 5, lines 33-35, figure 1) and a cone angle in the range 8-75° ("the angle must be no more than about 60o", column 6, lines 49-50)

5. Chau does not specifically teach a ration Lo/Do of at least 5. However, Chau further teaches "the size and geometry of the hole are preferably selected to maximize the stability of the dope flow through the hole" (column 6, lines 3-6). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio of the constant diameter zone for the purpose of maximizing flow stability. It has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233, 235.*

6. Should applicant wish to argue that the teachings of Chau under *In re Aller* as cited above are insufficient to obviate the claimed Lo/Do ratio the rejection may be considered in view of Honnaker.

7. In the same field of endeavor, spinnerets, Honnaker teaches "typically capillary diameters are 2 to 4 mils (0.05 to 0.10 mm) at L/D ratios of at least about 2.5. Preferably the diameter of the counterbore is from 6 to 12 or more times the diameter of the spinning capillary and the length of the counterbore … is about 2 to 8 times the diameter of the counterbore" (column 4, lines 2-9, figure 2) for the purpose of obtaining filaments with preferred tensile properties from solutions of a given viscosity (column 3, lines 66-68). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio to at least 5 as taught by Honnaker for the purpose of producing filaments with the desired properties based on solution viscosity.

8. Claims 1, 2, 4-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kavesh (US 6448359) further in view of Chau (US 5296185) and optionally in view of Honnaker (US 4054468) (all of record).

9. With respect to claim 1, Kavesh teaches:

Process for making high-performance polyethylene multifilament yarn ("preparing a high tenacity, high modulus multi-filament yarn", column 1, lines 37-39) comprising the steps of

a) making a solution of ultra-high molar mass polyethylene (UHPE) in a solvent ("extruding a solution of polyethylene and solvent", column 1, lines 39-40), wherein the UHPE has an intrinsic viscosity of between 5 and 40 dl/g ("a solution of polyethylene and solvent having an intrinsic viscosity between about 4 dl/g and 40 dl/g", column 1, lines 39-41 and for example "linear polytethylene was Himont UHMW 1900 having an intrinsic viscosity of 18 dl/g", column 6, lines 1-2);

b) spinning of the solution through a spinplate containing a plurality of spinholes into an air-gap to form fluid filaments (through a multiple orifice spinneret into a cross-flow gas stream", column 1, lines 41-42), while applying a draw ratio ("stretching the fluid product", column 1, line 43)… DRag at least 1 ("jet draw must be at least 5:1, and is preferably at least about 12:1", column 5, lines 9-11);

c) cooling the fluid filaments to form solvent-containing gel filaments ("quenching the fluid product in a quench bath…to form a gel product", column 1, line 46-48);

d) removing at least partly the solvent from the filaments ("removing the solvent from the gel product", column 1, line 49); and

e) drawing the filaments in at least one step before, during and/or after said solvent removing, while applying a draw ratio ("stretching the gel product", column 1, line 48) DRsolid of at least 4 (see Table 1, examples 1-5 column "solid state stretch" where all values are above 4), wherein

each of the spinholes has a geometry comprising a contraction zone having a gradual decrease in diameter from a diameter D0 to a diameter Dn ("the spinneret holes 28 should have a tapered entry region 30", column 4, lines 49-50)…

and wherein each of the spinholes comprises a zone downstream of the contraction zone ("the spinneret holds 28 should have a tapered entry region 30 followed by a capillary region of constant cross section 32", column 4, lines 50-52) having a constant diameter Dn of from 0.3 to 5 mm ("the capillary diameter should be 0.2 to 2 mm preferably 0.5 to 1.5 mm", column 4, lines 54-55) and a length Ln with a length/diameter ratio of Ln/Dn of from 0 to at most 25 ("in which the length/diameter (L/D) ratio is more than about 10:1", column 4, lines 52-53)

10. Kavesh does not define a DRfluid as claimed or teach that the spinholes have a constant diameter inflow zone upstream of the contraction zone.

11. In the same field of endeavor, solution spinning spin plates for high viscosity solutions, Chau teaches a spinneret where "each hole contains (a) an inlet (1) (b) optionally, a transition cone (2) where the hole narrows by an angle (theta) before entry into a capillary section" (column 5, lines 31-35, figure 1) for the purpose of maximizing the stability of the process (column 6, lines 3-5) of spinning polymers with viscosities greater than 5dl/g (column 5, lines 21-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by

Kavesh by using a spin plate with an added inlet section upstream of the cone as taught by Chau for the purpose of stabilizing the process of solution spinning.

12. Chau further teaches that the cone angle of the transition section varies from less than about 90o to less than about 20o depending on shear rate (column 6, lines 46-52).

13. Chau further teaches “the air gap contains a draw zone where the dope is drawn to a spin-draw ratio of at least about 20, preferably at least about 40, more preferably at least about 50, and most preferably at least about 60” (column 7, lines 58-62 – examiner understands this ratio to be DRag of the instant invention).

14. The combination of Kavesh and Chau as above does not explicitly teach a DRfluid as claimed:

Of at least 50, wherein DRfluid = DRsp X DRag where DRsp is the draw ratio in the spinholes and DRag is the draw ratio in the air-gap, with DRsp greater than 1 and and DRag being at least 1

15. However, DRsp is defined in the specification as DRsp = $(Do/Dn)^2$. Figure 2 of Kavesh clearly shows that the diameter of the spinhole at entry is greater that the diameter of the capillary outlet and Kavesh as cited above specifically teaches “the spinneret holes 28 should have a tapered...region" (column 4, lines 50-51). Thus it would be clear to one of ordinary skill in the art that Kavesh teaches a DRsp greater that 1. Furthermore, Figure 1 of Chau clearly shows that Do – the spinneret entry hole diameter is greater the spinneret capillary outlet and Chau specifically teaches “the hole is preferably broader at the inlet, and becomes narrower through a transition cone within the spinneret to form a capillary section that leads to the exit” (column 5, lines 59-62). Thus it would be clear that Chau teaches a DRsp greater than 1. The combination as

above teaches that the DRag must be at least 5 (Kavesh) and can be greater than 50 (Chau) for the purpose of producing fibers with a desired diameter per filament (Chau, column 7, lines 65-66). It would have been obvious to one of ordinary skill in the art at the time of the invention that the combination teaches a range of DRfluid values which includes the claimed range of at least 50 for the purpose of producing fibers with a desired diameter. Further more it has been held that where the claimed range overlaps or lies inside of a prior art range a prima facie case of obviousness exists. *See In re Werthim, 541 F2d 257, 191 USPQ 90 (CCPA 1976).*

16. The combination does not teach that the Lo/Do ratio of the constant diameter zone is at least 5.

17. Chau further teaches "the size and geometry of the hole are preferably selected to maximize the stability of the dope flow through the hole" (column 6, lines 3-6). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio of the constant diameter zone for the purpose of maximizing flow stability. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233, 235.*

18. Should applicant wish to argue that the teachings of Kavesh and Chau under *In re Aller* as cited above are insufficient to obviate the claimed Lo/Do ratio the rejection may be further considered in view of Honnaker.

19. In the same field of endeavor, spinhole design, Honnaker teaches "typically capillary diameters are 2 to 4 mils (0.05 to 0.10 mm) at L/D ratios of at least about 2.5.

Preferably the diameter of the counterbore is from 6 to 12 or more times the diameter of the spinning capillary and the length of the counterbore … is about 2 to 8 times the diameter of the counterbore" (column 4, lines 2-9, figure 2) for the purpose of obtaining filaments with preferred tensile properties from solutions of a given viscosity (column 3, lines 66-68). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio in the spin plate of the combination as taught above such that it is at least 5 as taught by Honnaker for the purpose of producing filaments with the desired properties based on solution viscosity.

20. With respect to claim 2, Chau further teaches "the spinneret may contain as many as 100 or 1000 or more" spinholes (column 5, lines 25-26).

21. With respect to claim 4, Chau as applied in the combination above teaches that the cone angle of the transition section varies from less than about 90o to less than about 20o depending on shear rate (column 6, lines 46-52).

22. With respect to claims 5 and 6, Chau as applied in the combination above teaches "the hole is preferably broader at the inlet, and becomes narrower through a transition cone within the spinneret to form a capillary section that leads to the exit" (column 5, lines 59-62) but does not teach a specific Do/Dn ratio.

23. Chau further teaches "the size and geometry of the hole are preferably selected to maximize the stability of the dope flow through the hole" (column 6, lines 3-6). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Do/Dn ratio to give a desired draw ratio for the purpose of controlling the diameter of the filaments. It has been held that where the general conditions of a claim

are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233, 235.*

24. With respect to claims 7 and 8, Kavesh as applied above teaches that the spinneret holds 28 should have a tapered entry region 30 followed by a capillary region of constant cross section 32 in which the length/diameter (L/D) ratio is more than about 10:1" (column 4, lines 50-53). In addition, Chau further teaches that the spinholes contain "(c) a capillary section (9), which is the thinnest (smallest-diameter) section of the hole where th walls are about parallel" (column 5, lines 36-38, figure 1) and "the length of the capillary section is ... preferably at least about 0.1 times the diameter of the capillary... nor more than about 10 times the diameter of the capillary" (column 5, lines 45-53). It has been held that where the claimed range overlaps or lies inside of a prior art range a prima facie case of obviousness exists. *See In re Werthim, 541 F2d 257, 191 USPQ 90 (CCPA 1976).*

25. With respect to claim 10, the combination does not teach that the Lo/Do ratio of the constant diameter zone is at least 10.

26. Chau further teaches "the size and geometry of the hole are preferably selected to maximize the stability of the dope flow through the hole" (column 6, lines 3-6). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio of the constant diameter zone for the purpose of maximizing flow stability. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233, 235.*

27. With respect to claim 11, Chau further teaches:

wherein the spinplate comprises at least 10 cylindrical spinholes ("the spinneret may contain as many as 100 or 1000 or more" spinholes, column 5, lines 25-26), and wherein each cylindrical spinhole includes an inflow zone of constant diameter Do and a length Lo ("each hole contains (a) an inlet (1)", column 5, lines 31-32, figure 1) …, a downstream zone of constant diameter Dn and a length Ln ("a capillary section (9)", column 5, line 36, figure 1) with a length/diameter ratio Ln/Dn of at most 15 (the length of the capillary is preferably nor more than about 10 times the diameter of thee capillary", column 5, lines 50-52), and a contraction zone between the inflow and downstream zones having a gradual decrease in diameter from the diameter Do to the diameter Dn with a cone angle in the range of 10-60° ("the angle must be no more than about 60", column 6, lines 49-50).

28. The combination does not teach that the Lo/Do ratio of the constant diameter zone is at least 10.

29. Chau further teaches "the size and geometry of the hole are preferably selected to maximize the stability of the dope flow through the hole" (column 6, lines 3-6). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio of the constant diameter zone for the purpose of maximizing flow stability. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233, 235.*

30. With respect to claim 12, the combination as applied to claim 1 above teaches DRsp's greater than 1.

31. Chau further teaches that "very high spin-draw ratios (such as 75, 100, 150 or 200 ore more) may be desirable" (column 7, line 68 to column 8, line 1) for the purpose of "spinning low diameter filaments using large holes" (column 7, lines 67-68).

32. It would have been obvious to one of ordinary skill in the art at the time of the invention that the combination teaches a range of DRfluid values which includes the

claimed range of at least 100 for the purpose of producing low diameter fibers with a spinneret with large holes. Further more it has been held that where the claimed range overlaps or lies inside of a prior art range a prima facie case of obviousness exists. *See In re Werthim, 541 F2d 257, 191 USPQ 90 (CCPA 1976).*

33. With respect to claim 13, Kavesh further teaches:

> Spinning a 3-15 mass% solution ("12 wt% linear polyethylene", column 5, line 55) of linear UHPE of IV 15-25 dl/g ("the linear poluethylene was himont UHMW 1900 having an intrinsic viscosity of 18 dl/g", column 6, lines 1-2) through a spinplate containing at least 10 spinholes ("feed the polymer solution …to a 16-hole spinneret", column 6, line 6-7) into an air-gap ("passed through a spin gap", column 6, lines 11-12), … and a draw ratio DRsolid of between 10 and 30 (see "solid state stretch" Table 1).

34. The spinhole geometry as instantly claimed is obvious over the combination as applied to claim 11.

Response to Arguments

35. Applicant's arguments filed 09/14/2010 have been fully considered but they are not persuasive. Applicant's remarks provide background information regarding polymers a yarn forming but little in the way of explicit arguments which can be addressed.

36. Examiner considers that aside from the specifically quoted statements below applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

37. The remarks read "in view of the above comments, applicants suggest that claims 14-15 are patentably unobvious over Chau, alone or optionally with Honnaker" (remarks, page 8, lines 13-14).

38. Examiner finds this argument to be unpersuasive. As noted above, claims 14 and 15 are apparatus claims thus the intended use of the spinplate carries no patentable weight and the materials used in the applied references are irrelevant in this rejection. Chau individually, or in combination with Honnaker, as applied above discloses or obviates all the limitations of claims 14 and 15. Furthermore, spinplate thickness is not a claimed limitation and the diameter ranges of Chau overlap with the diameter ranges of Honnaker.

39. Applicant argues "as has been emphasized during previous prosecution, the spinplate of Kavesh does not have a contraction region as defined in the pending claims herein – it only has an entry region" (page 8, lines 17-19).

40. Examiner continues to find this argument unpersuasive. As explained in the response to arguments section of the previous action (Non-Final Office Action 03/18/2010), a contraction zone is defined in claim 1 as "having a gradual decrease in diameter from a diameter Do to a diameter Dn and a cone angle in the range from 8-75o". Kavesh, as illustrated by figure 2, clearly shows a spinhole with an initial diameter and a gradual decrease in diameter to a smaller diameter capillary region. The examiner considers this zone of decreasing diameter to be a contraction zone as defined by the claim and thus the teachings of Kavesh are sufficient to obviate a contraction zone as claimed regardless of whether or not it is used for the purpose disclosed in the instant specification but not claimed.

41. Applicant argues “Chau relates to a different field of polymers and the same parameters that apply to UHPE cannot be said to immediately also obviously apply to Chau and vice versa" (page 8, lines 22-24).

42. Examiner finds this argument to be unpersuasive. The rejection is based upon the combination of Kavesh and Chau and one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, the fact that the viscosity ranges for the polymers being spun by Kavesh (column 1, lines 40-42) and Chau (column 4, lines 21-32) are substantially identical would lead one of ordinary skill in the art to consider both references as it is known in the art that solution viscosity is a primary feature to be considered when designing spinplates (Chau, column 6, lines 60-63).

43. Applicant argues that “the ordinarily skilled person could not expect an improved drawability of an UHPE fiver by increasing the diameter of spinholes of Honnaker and moreover optimizing the L0/D0 of Chau” (page 9, lines 3-5).

44. Examiner finds this argument to be unpersuasive. As applied in the rejection above Kavesh teaches or obviates the general features of the spinholes as claimed, except for the upstream constant diameter zone. In the same field of endeavor, spinholes for high viscosity spinning, Chau teaches the use of spinholes with the claimed three part structure and teaches or obviates optimizing the specific dimensions claimed. Therefor examiner considers that it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the method taught by Kavesh by using a spin plate with an added inlet section upstream of the cone as taught by Chau for the purpose of stabilizing the process of solution spinning.

45. The optionally included Honnaker further teaches that it is known in the art of high viscosity dope spinning to use a three part spinhole (figure 2) with an entry region which has dimensional ratios as claimed (column 4, lines 2-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the Lo/Do ratio in the spin plate of the combination as taught above such that it is at least 5 as taught by Honnaker for the purpose of producing filaments with the desired properties based on solution viscosity.

46. With regards to the scalability of the specific diameter range of Honnaker, Chau as applied in rejection of claim 14 teaches the use of both small diameter spinning holes (column 6, lines 13-19) and large diameter spinning holes (column 6, lines 19-24). The small diameter range of Chau overlaps with that taught by Honnaker (column 4, lines 2-10) as applied while the larger diameter range overlaps with Kavesh (column 4, lines 54-55). Thus examiner considers that Chau illustrates that it would have been within the skills of one of ordinary skill in the art at the time of the invention to scale up the dimensions taught by Honnaker to a size such as that taught by Kavesh or instantly claimed with expected results. It has been held that the combination of familiar elements according to known methods is likely to be obvious when it does not more than yield predictable results. *KSR Int'l Co. v. Teleflex Inc.,* 82 USPQ2d 1385 (2007).

Conclusion

47. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALISON HINDENLANG whose telephone number is (571) 270-7001. The examiner can normally be reached on Monday to Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yogendra N Gupta/
Supervisory Patent Examiner, Art Unit 1791

ALH